

ORIGINAL PROPOSAL (Updated)

PROPOSAL

FOR

Bi-Directional Amplifier Engineering, Equipment and
Installation Services (RFP # 08-004-067)
(Shelby County Sheriff's Office)



SUBMITTED BY:

 **Lord & Company, Inc.**
Instrumentation & Control Systems

8811 Sudley Road
Manassas VA 20110
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www.lordandcompany.com

Juan G. Cabrera P.E.
President

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2.0 Proposal Response Sheet and Utilization Report

ATTACHMENT Proposal Response Sheet

BI-DIRECTIONAL AMPLIFIER ENGINEERING, EQUIPMENT AND INSTALLATION SERVICES, RFP #008-004-67

Name of firm: Lord & Company Inc., an Alabama Corporation

Firm's Website: www.lordandcompany.com

Mailing Address: 8811 Sudley Road, Manassas VA, 20110

Phone: 703.361.6009

Fax: 703.368.8026

Remit Address: SAME AS ABOVE

Payment Terms: Net 30 Days

Authorized Representative: Juan G. Cabrera

Print: Juan G. Cabrera

Signature (Person authorized to negotiate with the County on behalf of the organization/firm.)

Email address: b.cabrera@lordandcompany.com

Authorized Representative: Robert M. Butchko

Print: Robert M. Butchko

Signature (Person authorized to negotiate with the County on behalf of the organization/firm.)

Email address: b.butchko@lordandcompany.com

The signature (s) above indicates that certifies that:

- (i) the Proposer's signatory is an agent authorized to submit proposals on behalf of the organization/firm;
- (ii) all declarations in the proposal and attachments are true to the best of reasonable knowledge;
- (iii) all aspects of the proposal, including cost, have been determined independently, without consultation with any other prospective Proposer or competitor for the purpose of restricting competition;
- (iv) the offer made in the proposal is firm and binding for 90 days after receipt of the proposal by the County; and
- (v) all aspects of this RFP and the proposal submitted are binding for the duration if this proposal is selected and a contract awarded.

EOC #: EOC-V-0509-1294

☒ **X** Check here if you qualify as a MBE - YES or WBE _____
(Minority or Woman owned Business Enterprise) If so, please indicate the classification below:

☐ African American (☒) Hispanic ☐ American ☐ Asian American ☐ Native American
☐ Other

☐ Check here if you qualify as an LOSB (Locally owned Small Business)

NOTE: Lord and Company has read and will fully comply with.....

AN ORDINANCE TO AMEND CHAPTER 12, CODE OF ORDINANCE, SHELBY COUNTY GOVERNMENT, SO AS TO ESTABLISH A LIVING WAGE STANDARD

Lord & Company Inc.

Juan G. Cabrera
President

Full Time Permanent Employees										
	Subtotals	Male					Female			
		White	African American	Hispanic	Asian/Pacific Islander	Other	White	African American	Hispanic	Asian/Pacific Islander
Office and Managers	6	2	1							
Technicians	9	2								
Production	11									
Skilled										
Operator (Semi-Skilled)										
Unskilled										
Service Workers										
Totals	26	2	10	1	3	1	2			

The Concept of race used by the Equal Employment Opportunity Commission does not identify race as a scientific definition of and/or biologic origins. For the purpose of this report, an employee may be included in the group in which he or she appears to belong, identify with, or is regarded in the community as belonging. However, no person should be counted in more than one racial/ethnic category.

NOTE: 1. The Category "HISPANIC" while not a race identification is included as a separate racial/ethnic category because of the employment discrimination often encountered by this group, but this reason do not include "HISPANIC" under either "white" or "black".

For the purpose of this report the following racial/ethnic categories will be used:

a) The Category "White" (most of Hispanic origins): All persons having origins in any of the original peoples of Europe, North Africa or Middle East.

b) The Category "African American": Persons having origins in any of the original peoples of African.

c) The Category "Hispanic": All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture regardless of race.

d) The Category "Asian or Pacific Islander": All

persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes for example, China, Japan, Korea, the Philippine Islands, and Samoa.

e) The Category "American Indian or Alaskan Native": All persons having origins in any of the original peoples of North America and who maintain cultural identification through tribal affiliation community recognition.

Source: Bureau of Census

3.0 Comprehensive Response.

a. Exceeding the Minimum Requirements

LORD & Company, Inc. is one of the few vendors in the country that has been designing and installing Bi-Directional Amplifier (BDA) based radio communication systems for over fourteen years. The systems we designed and installed have performed under the most extreme conditions for years without failure. Our systems have survived catastrophic emergencies, such as the Carnival Cruise liner Ecstasy fire at sea, where our system continued to work, and allowed the safe evacuation of the lower aft decks. Another example is the systems we have installed in the steam tunnels under our Nations Capitol, where temperatures are consistently at 160 degrees F. We have many such examples. These two are testimony to our knowledge and experience designing and installing these types of systems.

Clearly, the above referenced BDA based radio communications systems were installed long before the tragic events in so many of our schools systems, and 9-11, a tragedy that highlighted the need for reliable Public Safety In-Building Communications systems. Today we successfully continue, on a daily basis, to design and install public safety systems exactly as required by this RFP in public buildings schools and many types of commercial building.

We believe with confidence and pride that we meet and or exceed the minimum requirements.

Among the minimum requirements listed are:

1. Sufficient staff or sub-consultants experienced in 800 MHz bi-directional amplifiers engineering and installation. Out of the fifteen, full time, computer and electrical engineers we have on staff, five are experienced in wireless and in-building radio communications systems. In addition we have two installation crews that only work on Public Safety In-Building systems. Four of these individuals have been with our company for over ten years.

2. Have previous experience in implementing 800 MHz bi-directional amplifiers engineering and installation. Lord & Company has been designing and installing DBA systems for almost fifteen years. Beginning in 1994, we first started using this technology in shipboard systems for the US Navy. Our company equipped seven US Navy ships with wireless radio communications. This work opened doors in the cruise line industry where in the late 1990's we designed and installed DBA based radio systems on over ten cruise ships for Carnival and Royal Caribbean. Today we successfully continue, on a daily basis, to design and install public safety systems exactly as required by this RFP in public buildings schools and many types of commercial building.

3. Have demonstrated experience in implementing 800 MHz bi-directional amplifiers engineering and installation with governmental agencies. As a former 8(a) company, and a company involved in Instrumentation and Control Systems for water and waste water treatment plants, LORD has extensive experience working with local, state and federal governments. Over the years, our company was received numerous awards including US Navy contractor of the year, and has had the distinction of having Mr. Cabrera named as the small business person of the year by the US Small Business Administration, both in the Richmond District and the Philadelphia region. Clearly, this distinction was awarded to the president because of the reputation and quality of the work performed by Lord & Company, Inc. In addition, our facility has a Secret clearance, which although not of value to this project, is testimony to the organization and systems our company has in place to satisfy the rigid DOD requirements. Some of these awards and letters of reference are include in section 7 – Additional Information

4. Have a minimum of three (3) years experience providing the Services. Lord and company first started its RF Communications Division in 1994. The exclusive focus of this division was "signal propagation" for radio communications. Our company has almost fifteen years of experience providing these services

5. Have all appropriate licenses and certifications required in the State of Tennessee to perform the Services and procure all permits, pay all charges, taxes and fees. We are pleased to say that thanks to the support received from the sheriffs' office and the extension given by the county, we were able to fulfill all the licensing requirements with the state and the county. Our Tennessee Business license is 61127. However, we have been unable to speak with someone that can give us our State of Tennessee license number.

6. Have a valid Equal Opportunity Compliance (EOC) certification number or apply for an EOC number through our EOC Administration. Our EOC Number is EOC-V-0509-12914. The limit is set at \$1,500,000.00 and the classifications are CE-D, G; S-Equipment Installation; S-Wireless Communications.

7. Adhere to all Title VI requirements and provide proof/documentation if necessary. Lord & Company hereby commits to follow all title VI requirements as indicated in our corporate documents submitted prior to obtaining our EOC number

b. Qualifications to provide the services required.

LORD is uniquely qualified to provide these specific BDA engineering, equipment and installation services due to the following:

1. **Company Stability.** Established in 1982, Lord & Company, Inc. has a proven track record and the stability to perform in a variety of public and private sector projects.

2. Proven Track record of performance: well over 100 In-building and public safety projects successfully completed with a high degree of reliability.
3. Seasoned Management. Senior level and hands on management each with over thirty years experience in corporate and project management, with several awards to their credit.
4. Highly Experienced Engineering and Technical Staff. With a unique and clear understanding of "In-Building" communications. Mr. Gulbranson knowledge and expertise has prompted Bird Electronics to invite him to serve as product evaluator for the DBA's they manufacture. Customers such as the Smithsonian use him exclusively for providing, maintaining, servicing and/or troubleshooting their in-building DBA systems.
5. Experience working with Municipal and Local Governments. We understand the challenges that County and municipal governments have in front of them. We have the patience and flexibility to work within the constraints and rules that are unique to local governments our reference letter is from Arlington County VA ECC Manager.
6. Experience working out of state. Over the last 25-years, Lord & Company has successfully performed on projects in all over the south east and California, Rhode island, Puerto Rico and, under a IDIQ contract for the US State department, in Tokyo, Frankfurt, Kampala, and Bangladesh.

c. Approach

1. General

Lord & Company believes that the success of any design/build project is dependent around several key elements: Good and regular communications with the client. Highly qualified technical staff, a good organization structure that properly supports the technical staff and the project. Also simple, straightforward procedures to facilitate the tasks and functions performed by the project staff. The home office in Manassas will provide all general administrative support, such as bookkeeping, payroll function, job costing and other clerical services.

2. Management Plan

In general, the project will be managed in the same manner as all of our In-Building projects. We do, however, understand the importance to establish the necessary trust, rapport and credibility with Shelby County personnel which, will in turn, determine the overall success of the project. We know the value of excellent communications and flexibility required when working with a new county government client. We are convinced that no design-build contract can be successful without a good working relationship with the client.

To properly address the requirements for the RFP, we have briefly described below our overall management plan.

2a. Organizational Structure

The project will be managed by a senior level manager with overall project performance and customer satisfaction responsibility. Reporting to him will be our lead design engineer and the field project supervisor. We are anticipating having two crews giving us the capability of working on two different sites concurrently. Each site would have a full-time, on-site working project supervisor, responsible for the daily work performed. We also anticipate having one or two local minority owned subcontractors to assist us with the electrical and cable installation work. The subcontractors were selected based on their related experience and responsiveness during this preliminary stage.

Filed at the end of this section is the proposed organizational chart for the staffing of the on-site operations for Lord & Company, Inc. under this project. The organizational chart graphically depicts the authority and functions of the on-site personnel from the Home office to the site.

2b. Site Functions, Responsibilities, and Authority of Key Project Personnel

Unlike other type of projects, In-Building communications do not require large on-site crews. Nevertheless, listed below are responsibilities and authority for key project functions. We intend to have one project manager and, depending on the number and locations being worked on at one time, multiple job-site supervisors.

A. Project Manager

Responsible for the overall client satisfaction and proper and successful performance of all technical and administrative requirements of the project. Plans, directs and coordinates all activities of the project with the client, to insure that goals, aims, or objectives specified for successful operations are accomplished in accordance with prescribed priorities, time limitations and schedule.

He reviews individual site and system requirements. Ascertains design requirements, skill set and experience required by the tasks. Also determines methods and procedures for accomplishment of projects, including assessment of labor, material and subcontracting requirements.

Assigns site management or technical personnel to specific phases or aspects of project, such as technical studies, design, preparation of installation drawings and testing in accordance with contractual requirements.

- Anticipates potential problems and seeks resolution ahead of time.
- Reviews specification/designs for compliance with good engineering practices, company standards and customers contract specification.
- Coordinates activities with the customer and reviews technical developments, scheduling and resolving engineering design and test problems.

- Conducts progress meetings with the customer and makes sure suggestions and comments are considered and addressed.
- Evaluates and approves design changes, specifications and drawing releases after customer approval. Controls expenditures within limitations of individual project budgets. Reviews interim and completion project progress reports.
- Consults with customer to determine functional and spatial requirements and coordinates access to buildings and facilities.
- Provides alternative solutions to resolve scheduling and other performance problems and disagreements and prioritizes multiple and concurrent tasks with the client.
- Resolves differences of opinions between Operations and Quality Control, as well as subcontractor differences with Quality Control by always keeping in mind the needs/desires of customer.
- Specifications and coordinating various phases of construction to prevent gaps or duplication.

B. Field Supervisor

Responsible for the proper and successful installation and construction of work required by the project. Also directs on-site activities of workers and subcontractors.

- Anticipates potential on-site field problems and seeks resolution ahead of time.
- Studies drawings and specifications to plan procedures for construction on basis of start and complete times. Verifies labor and material requirements for each building and phase of construction based on knowledge of tools, equipment and various installation methods.
- Assembles members of the site organization and subcontractors at start of project to review plans and procedures for timely completion of projects. Confers with and directs personnel and subcontractors in planning and executing work procedures, interpreting specifications and coordinating various phases of the installation to prevent delays and interference with school activities.
- Inspects work in progress to insure that workmanship conforms to quality standards, specifications and construction schedules are met.
- Prepares reports on field problems, progress, materials used and costs and adjusts work schedules if required.
- Designates and directs workers or subcontractors to specific tasks with immediate priority.
- Insures construction work performed is in accordance with plans, blueprints, codes and other specifications.
- Identifies materials, supplies, and equipment for purchasing. Schedules delivery dates and arranges for receipt and proper storage.
- Prepares daily, weekly and monthly progress reports.
- Furnishes sample recommendations, or field sketches, when needed, to facilitate field installation or resolution of technical conflicts.

- Assists Project Manager with the preparation of operating and maintenance manuals and maintain as-built drawings.
- Determines need for outside technical support and advises Project Manager.

C. Subcontract Manager

- Directs and coordinates activities concerned with placing and administering subcontracts.
- Directs and coordinates activities concerned with in-house purchasing of materials, equipment, machinery and supplies.
- Prepares instructions regarding purchasing systems and procedures and subcontract administration procedures.
- Directs and coordinates the preparation and issuance of purchase orders/subcontracts. Insures terms and conditions of in-house contractual instruments meet the requirements of prime contract.
- Oversees the negotiation and/or conducts direct negotiations, if needed, with subcontractors and suppliers. Insures subcontracts are within budget limitations prior to consummation of subcontract.
- Reviews and discusses project managers approval for contract change requests from subcontractors. Reviews prime contract change requests.
- Reviews briefing and reports from site supervisor on subcontractor performance. Insures subcontract management personnel are aware of any subcontractor/supplier performance problems.

2c. Quality Control

Quality Control in these types of projects is performed by our field supervisors who follow strict guidelines in the installation of the cable, connectors and antennas. Daily and weekly reports brief the project manager on the project on-going quality control steps taken. Subcontractors are asked to acknowledge full understanding of the quality control practices, projects inspection, evaluation process and impact of poor performance.

2d. Progress Schedule

Using Microsoft Project™ and the Critical Path Method (CPM) as our primary planning and scheduling tool, the Project Manager (PM) or his administrative support personnel maintain a current progress schedule for each task. This information is updated on a monthly basis based on information received from the field supervisors. Delays are highlighted and their nature discussed with on-site personnel and the owner. Resolution or steps to recover lost time is agreed upon and implemented as needed. Project progress schedules are submitted to the client for review and approval.

2e. Progress Report

Using information received from the on-site personnel, the Project Manager will submit progress reports to the owner and review details as needed. A monthly payment requisition is prepared in accordance with the agreed upon progress report.

2f. Material Submittals

The Project Manager will maintain a submittal register listing all material submittals for the project and from each subcontractor. If a submittal is disapproved, the Project Manager will review the specifics with the owner, make the needed corrections and re-submit the package for approval. Resubmission of previously disapproved material submittals will be numbered so as to track back to the original material submittal numbers. Upon receipt of approved material submittal, the Project manager will authorize issuance of a purchase order for the approved materials.

2g. Payrolls

The project management personnel will have access to copies of payroll information maintain copies of payroll reports from each subcontractor. The subcontractor will submit two copies of its payroll to the Area Manager within five days of the ending payroll period. The Subcontracts Manager will insure the payrolls are in compliance with the project requirements. In addition our On-site supervisor will conduct informal and random labor standard interview with subcontractor's employees using Standard Form 1445 or an appropriately developed equivalent. Information obtained during the interview will be checked against payroll data. Any inconsistencies will be brought to subcontractor's attention for immediate resolution and the Government will be notified. Inconsistencies will result in non-compliance checks and possible suspension by Lord & Company, Inc. from working on the project.

2h. Payments to Subcontractors

Administrative personnel will maintain records of payments made to subcontractors and suppliers. Subcontractors will submit their invoices for payment to the Project Manager. The Project Manager will verify progress payments request of subcontractor against our on-site most recent progress report. If the payment requested is correct, the project Manager will so approve the invoice and submit it to accounting for payment. Suppliers of Lord & Company, Inc. will submit invoices to the Area Manager, who will take the same action on suppliers' invoices as for subcontractor invoices. We intend to only pay for actual work completed, as confirmed by our field inspectors, and if appropriate, in accordance with a Schedule of Values submitted by the subcontractor upon receipt of the order, and approved by Lord & Company. The supplies/equipment will be incorporated into the progress schedule work elements.

2i. Contract Closeout

The Project Manager will maintain a closeout section for each school. This section will contain as-build drawings, equipment manuals, final test results and all applicable subcontractors' release of claims, quality control evaluation report, final inspection and acceptance records and other appropriate documentation pertaining to the completion of the system at each school.

2j. Warranty

The warranty section will include copies of all manufacturers warranties furnished to the county. Any warranty calls placed will be posted and documented with date of call, date of response, date warranty problem resolved and any other general comments to track warranties.

2k. Safety

Lord & Company considers safety and health an extremely important aspect of any project. In addition to weekly job-site meetings with employees and subcontractors in which issues specific to the weekly tasks are reviewed, we have published policy statements and safety manuals which we require our employees to familiarize themselves with. Our Safety Manual was modeled and prepared in accordance with the Army Corps of Engineers Safety and Health Requirements Manual, EM-385-1.

3. General Installation Process

The system shall be installed by fully trained technicians, experienced in the methods required to handle and install this type of system. Our local subcontractor will also be trained in the proper method of handling and installing these delicate systems. LORD technicians and project managers are factory trained in the installation, management and optimization of Bi-Directional Amplifier Systems.

The RF Power Dividers and Heliac cables shall be attached to the desired mounting surface, using appropriate hardware and non-halogenated cable clamps. Wherever possible, cable clamps will be installed on existing conduit/support structures for cable installation. All cable will be supported at a minimum of 3 feet in such a manner not to be damaged by thermal expansion and contraction. All cable, antennas, masts and equipment in the system will be properly grounded for lightning protection.

The repeater amplifiers shall be contained in a NEMA 4 enclosure and securely mounted to the wall. Power to the DBA's will be hard wired by licensed electricians and properly labeled with the source and location.

The installation work shall be performed during regular working hours. No work shall be done outside normal working hours, unless, prior approval is given by county's personnel. All work access times will be coordinated with the on-site county personnel or the designated person. There will be no interruption of essential services during the installation, and every effort will be made not to interfere with school activities

Upon completion of the installation phase, The system will be powered, optimized and properly balanced making sure there is no interference issues to or from the system installed.

4. Preliminary Schedule

Please refer to the preliminary schedule included in section 7 of this proposal. Worthy of note is that there is a six (6) to eight (8) week delivery lead time on the amplifiers, and, two (2) to four (4) week delivery on almost all of the other items including cable.

In addition, our schedule assumes we will be able to work on two schools simultaneously and we will be able to schedule schools one immediately after the other. It also assumes there will be no issues having access to the different areas for which work is scheduled.

Our preliminary schedule a project start date of June 30, 2008, with LORD starting the cabling within 10 days after notice to proceed. This further assumes that equipment approval will be given during the pre-construction period and no submittals will be required for approval prior to the start of installation.

Based on these assumptions the period of performance is 120 days after notice to proceed.

4.0 Cost & Fees

As discussed during the Pre-Bid conference, there is a significant difference in price between an In-Building system designed for -95 dBm with guaranteed 95% coverage, 95% of the time (Detailed specifications page 13, paragraph 1.b) and a system designed to satisfy the acceptance testing requirements outlined in page 17, paragraph 22. The acceptance testing requirements correspond to a Delivered Audio Quality Metrics level 3.4(DAQ 3.4) a national standard of audio testing can be achieved with a -96 to -105 dBm. Although all schools would still need BDA's to meet the DAQ 3.4, there are several areas where in-line amplifiers and cabling would not be needed. Cost Savings associated with this and other measures are outlined at the end of this Cost & Fees section.

In response to the more stringent requirements of the specifications, Lord & Company, Inc. will provide a completely turnkey service to include design, installation, testing, optimization and warranty for an internal 800 MHz Bi-Directional Amplifier System as required by the RFP. For a price of:

Eight Hundred Twenty Thousand Five Hundred Dollars (\$820,500.00)

A price breakdown for each piece of equipment and a total price per school along with a system design for each school is included in the pages that follow. The system will be designed to meet the RFP requirements and include the following.

1. All cables used meet UL, NEC, IEC, IEEE fire retardant codes and are low smoke and non-halogenated.
2. The installation cost provides for a four-man installation team and a project manager. Two locally owned small businesses will be used for installation support. The exact subcontract amount and scope of the subcontract services will be determined once the contract is awarded and design & installation schedules are finalized.
3. A thorough engineering design is required before final equipment and installation procedures can be determined. The final engineering design will take into account all building radio propagation characteristics (losses, standing wave...etc.), installation guidelines and any additional radio requirements imposed by the certification authority.
4. Basic equipment/materials used will be: TXRX's bi-directional Amplifiers (BDA) indoor signal boosters, 1/2" Helix cables, signal dividers, omni & yagi antennas, cable connectors, and installation hardware.
5. The end users must provide a source of power, preferably emergency power near the areas selected to house the electronic equipment. 120 VAC, dedicated 20-amp service is required.

a. Itemized costs - Equipment Unit Price Listing:

1. TXRX 800 MHz BDA, model# 62-89A	\$8,798.00/ea.
2. TXRX 800 MHz BDA Line Extender	\$1,138.00/ea.
3. Cushcraft Donor Antenna, model# PC8010N	\$ 106.03/ea.
4. PolyPhaser, model# IS-50NX-C2-MA	\$ 64.23/ea.
5. Andrew Helix Cable,	\$ 2.60/ft.
6. Andrew Cable Connector, model# L4PNM-RC	\$ 28.39/ea.
7. Andrew Signal Divider, model# S-2-CPUS-L-N	\$ 63.76/ea.
8. Andrew Signal Divider, model# S-3-CPUS-L-N	\$ 92.98/ea.
9. Andrew Signal Divider, model# S-4-CPUS-L-N	\$ 112.91/ea.
10. Andrew Decoupler, model# C-10-CPUS-L-N	\$ 146.11/ea.
11. Andrew Indoor Antenna, model# CELLMAX-O-25	\$ 35.87/ea.

#1. Pricing detail for Mt. Pisgah Middle School:

Material/Hardware	\$ 14,695.00
Engineering and Design	\$ 1,747.00
Project Management	\$ 494.00
Installation including travel & per-diem	\$ 11,379.00
System Test Optimization:	\$ 2,624.00
Tools, Rentals & Shipping Cost	\$ 1,035.00
Total Project Costs	\$ 31,974.00

#2. Pricing detail for South Wind Middle School:

Material/Hardware	\$ 14,516.00
Engineering and Design	\$ 1,747.00
Project Management	\$ 494.00
Installation including travel & per-diem	\$ 11,219.00
System Test Optimization:	\$ 2,624.00
Rentals & Shipping Cost	\$ 1,027.00
Total Project Costs	\$ 31,627.00

#3. Pricing detail for Arlington Middle School:

Material/Hardware	\$	17,511.00
Engineering and Design	\$	1,747.00
Project Management	\$	494.00
Installation including travel & per-diem	\$	14,389.00
System Test Optimization:	\$	2,624.00
Rentals & Shipping Cost	\$	1,142.00
Total Project Costs	\$	37,907.00

#4. Pricing detail for Dexter Middle School:

Material/Hardware	\$	14,554.00
Engineering and Design	\$	1,747.00
Project Management	\$	494.00
Installation including travel & per-diem	\$	11,139.00
System Test Optimization:	\$	2,624.00
Rentals & Shipping Cost	\$	1,028.00
Total Project Costs	\$	31,586.00

#5. Pricing detail for Woodstock Middle School:

Material/Hardware	\$	14,356.00
Engineering and Design	\$	1,747.00
Project Management	\$	494.00
Installation including travel & per-diem	\$	11,192.00

System Test Optimization:	\$	2,624.00
Rentals & Shipping Cost	\$	1,021.00
Total Project Costs	\$	31,434.00

#6. Pricing detail for Collier ville High School:

Material/Hardware	\$	22,526.00
Engineering and Design	\$	2,327.00
Project Management	\$	658.00
Installation including travel & per-diem	\$	20,132.00
System Test Optimization:	\$	3,498.00
Rentals & Shipping Cost	\$	2,123.00
Total Project Costs	\$	51,264.00

#7. Pricing detail for South Wind High School:

Material/Hardware	\$	28,940.00
Engineering and Design	\$	2,327.00
Project Management	\$	658.00
Installation including travel & per-diem	\$	27,599.00
System Test Optimization:	\$	3,498.00
Rentals & Shipping Cost	\$	2,367.00
Total Project Costs	\$	65,389.00

#8. Pricing detail for Arlington High School:

Material/Hardware	\$ 28,940.00
Engineering and Design	\$ 2,327.00
Project Management	\$ 658.00
Installation including travel & per-diem	\$ 27,599.00
System Test Optimization:	\$ 3,498.00
Rentals & Shipping Cost	\$ 2,367.00
Total Project Costs	\$ 65,389.00

#9. Pricing detail for Houston High School:

Material/Hardware	\$ 20,940.00
Engineering and Design	\$ 2,327.00
Project Management	\$ 658.00
Installation including travel & per-diem	\$ 18,787.00
System Test Optimization:	\$ 3,498.00
Rentals & Shipping Cost	\$ 1,746.00
Total Project Costs	\$ 47,956.00

#10. Pricing detail for Bolton High School:

Material/Hardware	\$ 29,905.00
Engineering and Design	\$ 2,327.00
Project Management	\$ 658.00
Installation including travel & per-diem	\$ 28,414.00
System Test Optimization:	\$ 3,498.00
Rentals & Shipping Cost	\$ 2,404.00

Total Project Costs	\$	67,206.00
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#11. Pricing detail for Germantown High School:

Material/Hardware	\$	87,498.00
Engineering and Design	\$	2,327.00
Project Management	\$	986.00
Installation including travel & per-diem	\$	51,957.00
System Test Optimization:	\$	5,246.00
Rentals & Shipping Cost	\$	5,863.00
Total Project Costs	\$	153,877.00

#12. Pricing detail for Millington High School:

Material/Hardware	\$	62,437.00
Engineering and Design	\$	2,327.00
Project Management	\$	986.00
Installation including travel & per-diem	\$	40,940.00
System Test Optimization:	\$	5,246.00
Rentals & Shipping Cost	\$	4,909.00
Total Project Costs	\$	116,845.00

#13. Pricing detail for Bartlett High School:

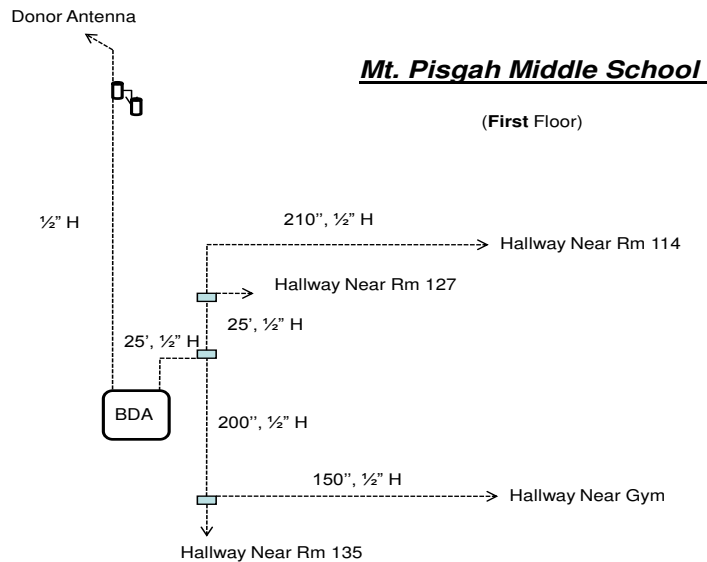
Material/Hardware	\$	46,780.00
Engineering and Design	\$	2,327.00
Project Management	\$	822.00

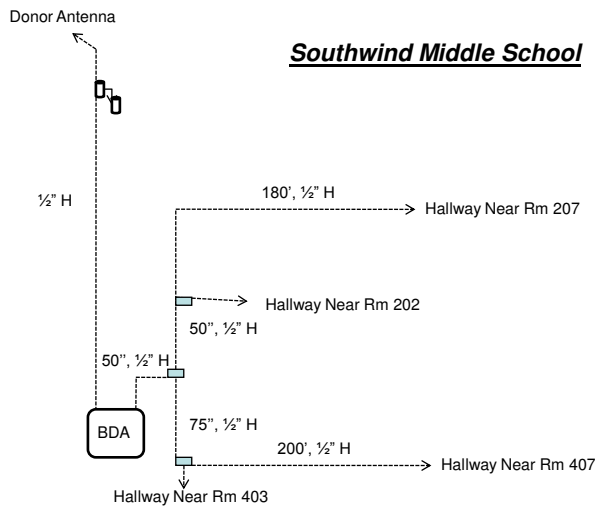
Installation including travel & per-diem	\$	30,939.00
System Test Optimization:	\$	3,498.00
Rentals & Shipping Cost	\$	3,680.00
Per Diem / Mileage	\$	8,792.00
Total Project Costs	\$	88,046.00

Total Cost for all 13 locations: \$820,500.00

(EIGHT HUNDRED TWENTY THOUSAND, FIVE HUNDRED DOLLARS)

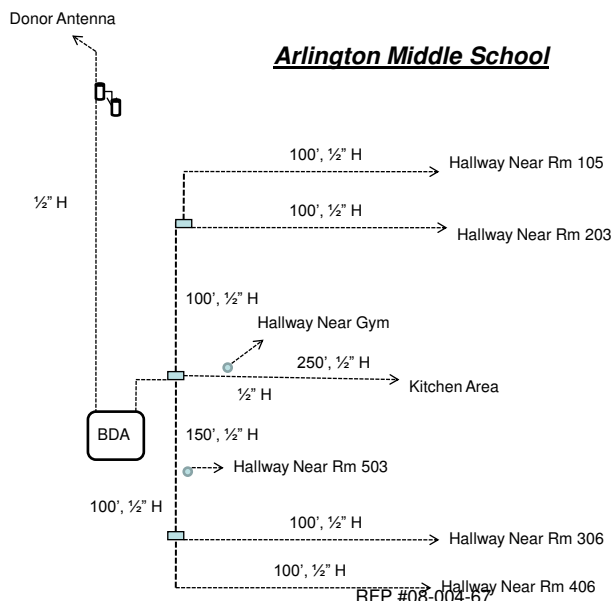
The above pricing is based our designs as shown below and intended to meet 95/95/95 specification requirement.





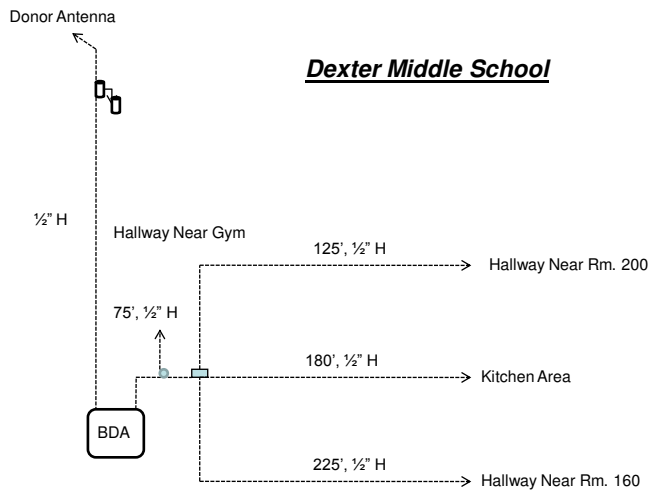
RFP #08-004-67

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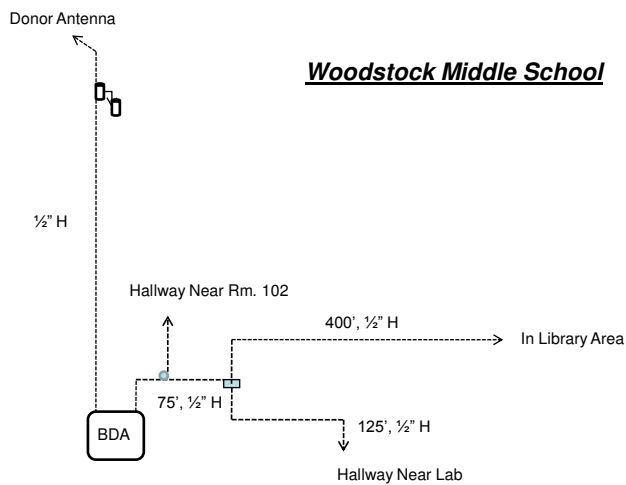
RFP #08-004-67

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RFP #08-004-67

4



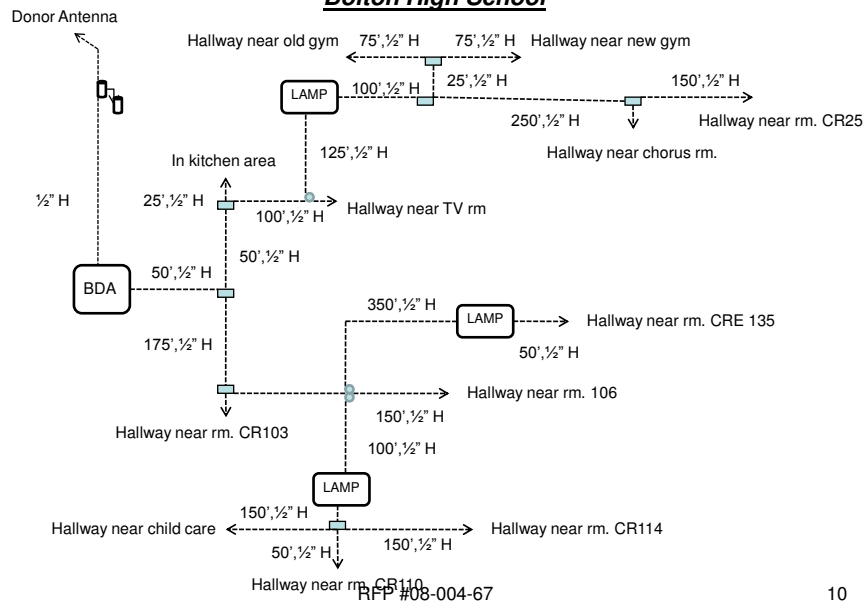
RFP #08-004-67

5



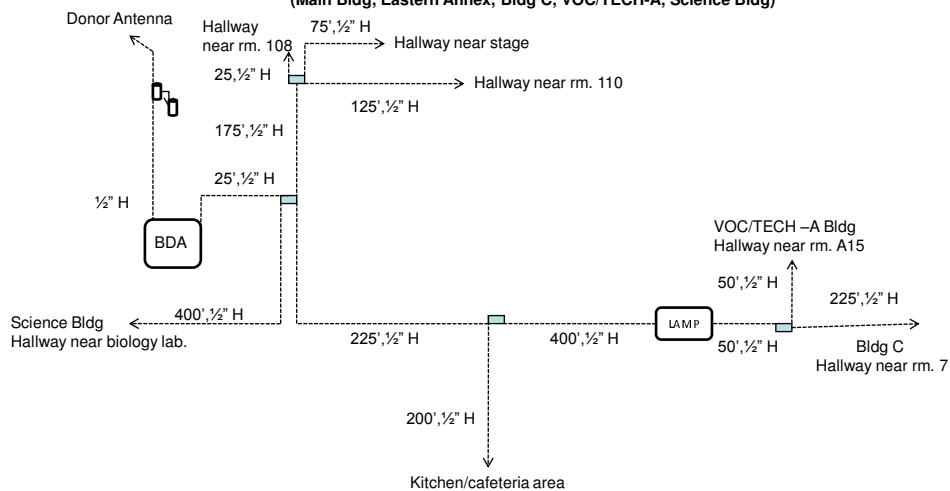


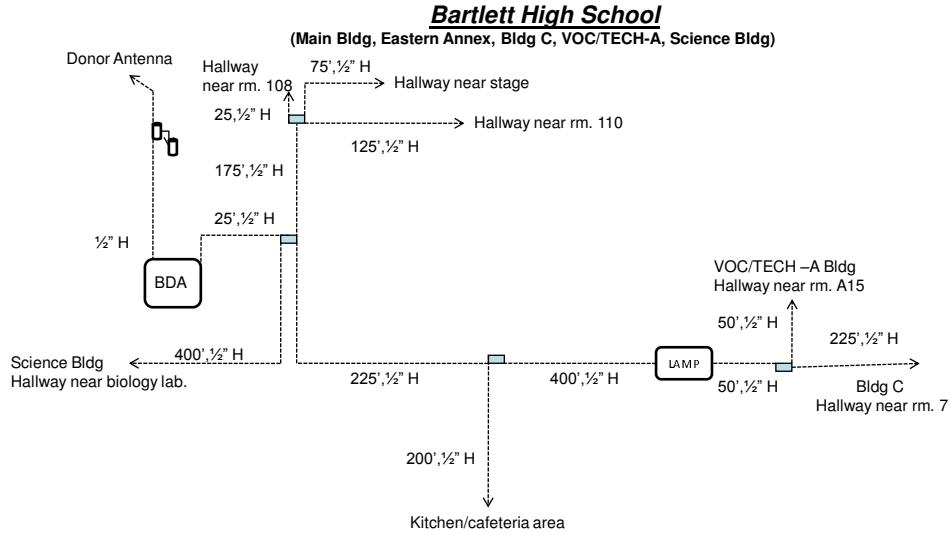
Bolton High School



Bartlett High School

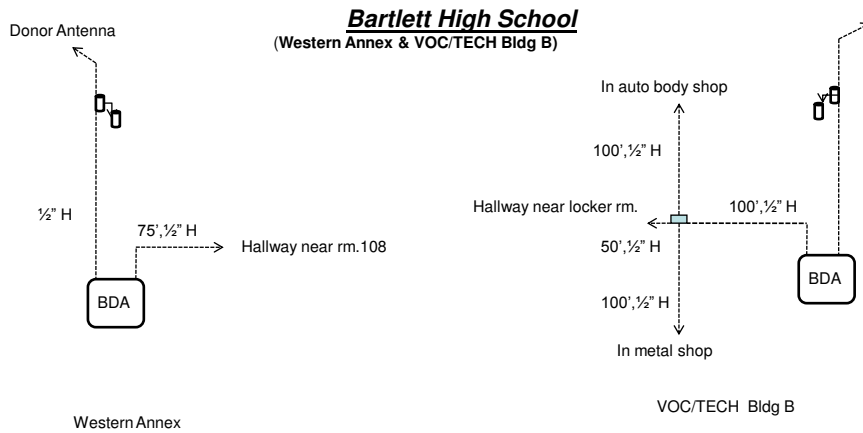
(Main Bldg, Eastern Annex, Bldg C, VOC/TECH-A, Science Bldg)





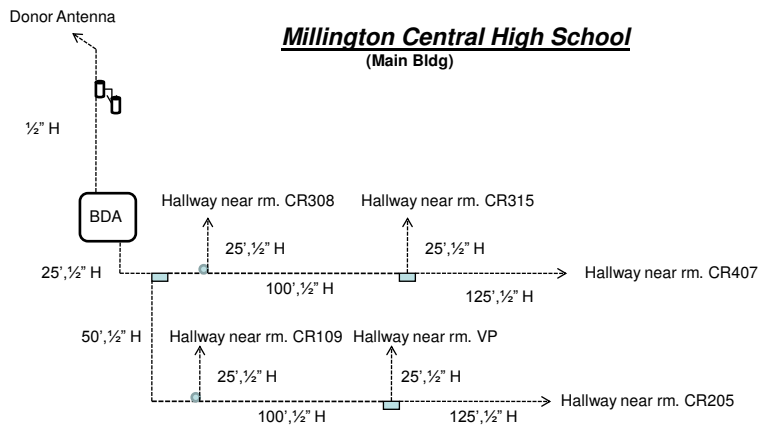
RFP #08-004-67

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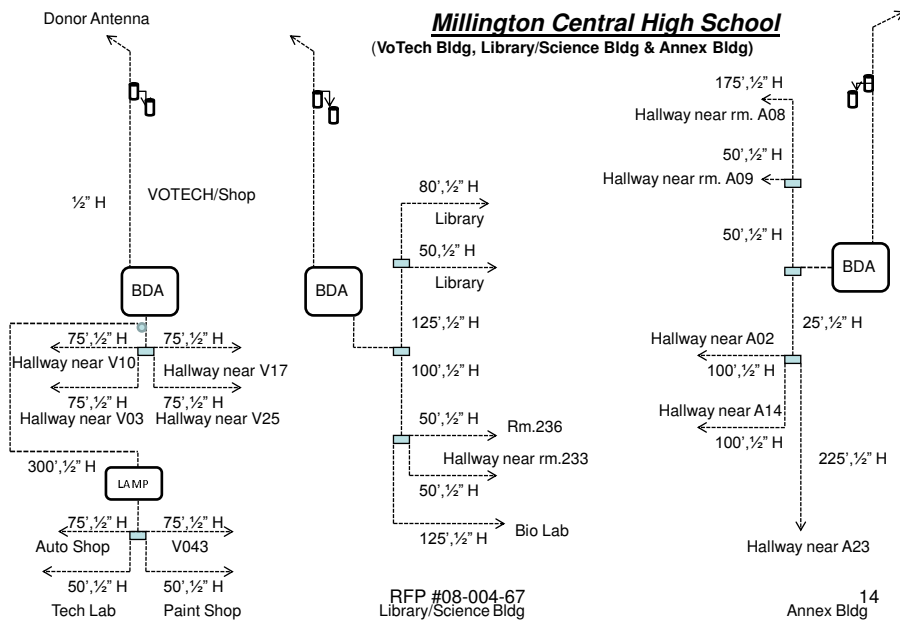
RFP #08-004-67

12

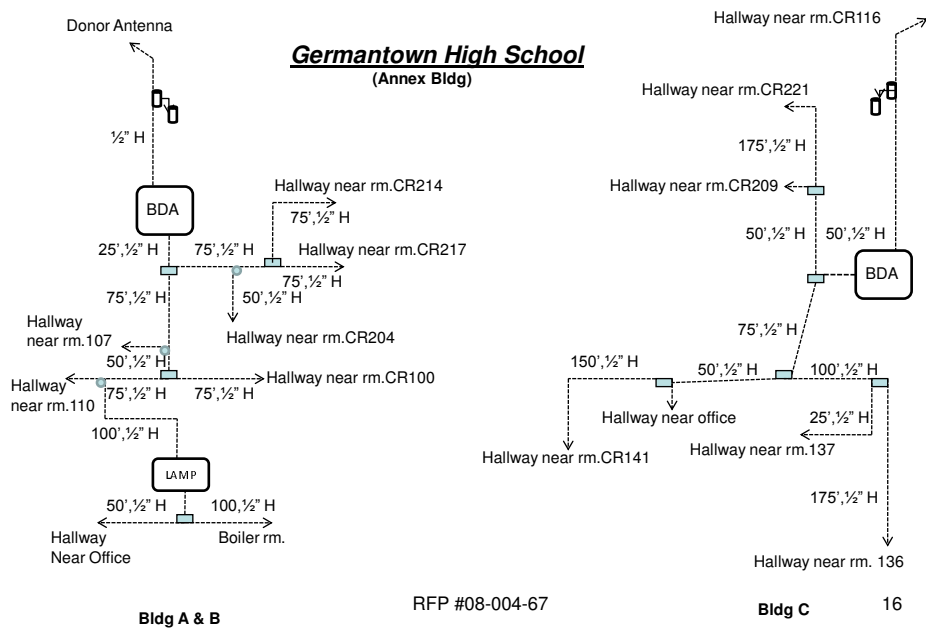
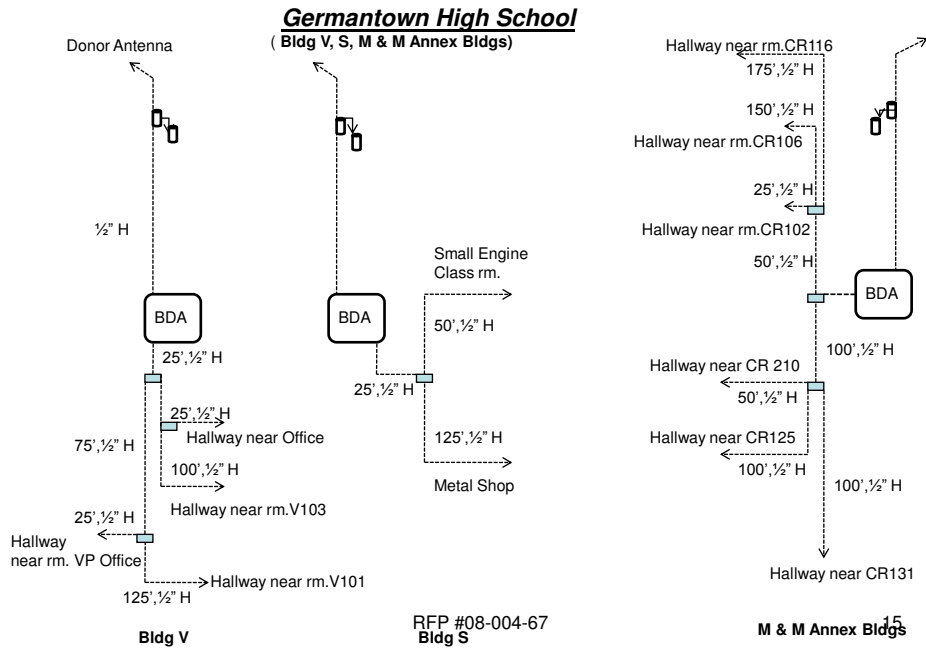


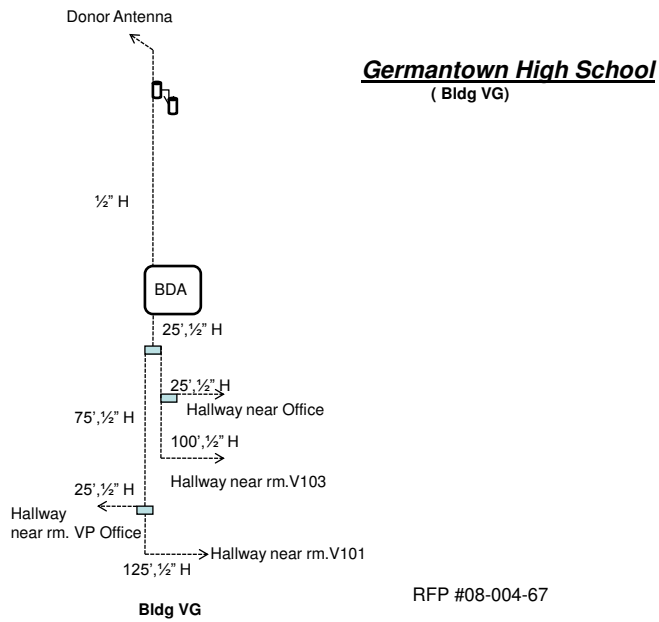
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14





RFP #08-004-67

17

Note: Sample Block diagram Figure 1B

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OPTION 1.

As an option to the specified 95/95/95 design and testing requirement, and in an effort to reduce costs without compromise in quality or functionality, we are proposing to design and test in accordance with the DAQ 3.4 testing guidelines.

The cost breakdown for the first five schools is as follows:

Shelby County Revised Prioritized Quote			August 10, 2008
School: Southwind High School			
<u>Price Area</u>	<u>RFP Price</u>	<u>3.4 DAQ</u>	<u>Cost Difference</u>
Material/Hardware	\$28,940.00	\$26,623.00	\$2,317.00
Engineering & Design	\$2,327.00	\$2,327.00	\$0.00
Project Management	\$658.00	\$658.00	\$0.00
Installation, Travel & Per-diem	\$27,599.00	\$25,505.00	\$2,094.00
System Test Optimization	\$3,498.00	\$3,498.00	\$0.00
Tools, Rentals & Shipping Cost	\$2,367.00	\$2,280.00	\$87.00
Total Project Costs	\$65,389.00	\$60,891.00	\$4,498.00

School: Southwind Middle School			
<u>Price Area</u>	<u>1st Quote</u>	<u>Revised Quote</u>	<u>Cost Difference</u>
Material/Hardware	\$14,516.00	\$13,962.00	\$554.00
Engineering & Design	\$1,747.00	\$1,747.00	\$0.00
Project Management	\$494.00	\$329.00	\$165.00
Installation, Travel & Per-diem	\$11,219.00	\$11,189.00	\$30.00
System Test Optimization	\$2,624.00	\$2,624.00	\$0.00
Tools, Rentals & Shipping Cost	\$1,027.00	\$848.00	\$179.00
Total Project Costs	\$31,627.00	\$30,699.00	\$928.00

School: Millington High School			
<u>Price Area</u>	<u>RFP Price</u>	<u>3.4 DAQ</u>	<u>Cost Difference</u>
Material/Hardware	\$62,437.00	\$59,576.00	\$2,861.00
Engineering & Design	\$2,327.00	\$2,327.00	\$0.00

Project Management	\$986.00	\$986.00	\$0.00
Installation, Travel & Per-diem	\$40,940.00	\$39,226.00	\$1,714.00
System Test Optimization	\$5,246.00	\$5,246.00	\$0.00
Tools, Rentals & Shipping Cost	\$4,909.00	\$4,167.00	\$742.00
Total Project Costs	\$116,845.00	\$111,528.00	\$5,317.00

School: Germantown High School			
<u>Price Area</u>	<u>RFP Price</u>	<u>3.4 DAQ</u>	<u>Cost Difference</u>
Material/Hardware	\$87,498.00	\$84,640.00	\$2,858.00
Engineering & Design	\$2,327.00	\$2,327.00	\$0.00
Project Management	\$986.00	\$986.00	\$0.00
Installation, Travel & Per-diem	\$51,957.00	\$51,129.00	\$828.00
System Test Optimization	\$5,246.00	\$5,246.00	\$0.00
Tools, Rentals & Shipping Cost	\$5,863.00	\$5,122.00	\$741.00
Total Project Costs	\$153,877.00	\$149,450.00	\$4,427.00

School: Arlington High School			
<u>Price Area</u>	<u>RFP Price</u>	<u>3.4 DAQ</u>	<u>Cost Difference</u>
Material/Hardware	\$28,940.00	\$26,623.00	\$2,317.00
Engineering & Design	\$2,327.00	\$2,327.00	\$0.00
Project Management	\$658.00	\$658.00	\$0.00
Installation, Travel & Per-diem	\$27,599.00	\$25,505.00	\$2,094.00
System Test Optimization	\$3,498.00	\$3,498.00	\$0.00
Tools, Rentals & Shipping Cost	\$2,367.00	\$2,280.00	\$87.00
Total Project Costs	\$65,389.00	\$60,891.00	\$4,498.00
Total Cost For All 5 Schools	\$433,127.00	\$413,459.00	\$19,668.00

The added cost breakdown to include remote monitoring and battery back-up systems, for the above listed five schools, is shown below. Because we are not sure if all the above listed schools will have the need of a battery back-up system, we suggest that the battery back-up system be added on a change order after the need for their use is confirmed.

Additional Cost For Optional Features

Schools	Revised Cost For DAQ 3.4	Remote Monitoring & Control of BDA	Battery Back- Up For BDA	Additional Cost For Monitoring & Control
Southwind HS	\$60,891.00	\$432.00	\$3,468.00	\$64,791.00
Southwind MS	\$30,699.00	\$432.00	\$867.00	\$31,998.00
Millington HS	\$111,528.00	\$1,728.00	\$4,335.00	\$117,591.00
German HS	\$149,450.00	\$2,592.00	\$6,069.00	\$158,111.00
Arlington HS	\$60,891.00	\$432.00	\$3,468.00	\$64,791.00
Total Cost	\$413,459.00	\$5,616.00	\$18,207.00	\$437,282.00

- d. Explain any assumptions or constraints in a price proposal to perform the Services. Our priced is based on us having an installation schedule that allows for the continuous working of crews. Begin work in a school and continue there until the installation is complete. Immediately move to the next scheduled school with no delay. In addition, our price does not include any amounts for custodian fees or fees to open the schools for us. It assumes we will have a 10-hour workday with uninterrupted access to the facilities.

In addition, our price is based on the assumption that the contract will allow for monthly progress payments. Monthly invoices showing the percent completion of each item listed on a pre-approved, school-by-school, schedule of values will be processed and sent for approval and payment. Invoices, less a 10% retainage, will be due and payable 30 days after receipt. The 10% retainage will be billed for upon satisfactory testing of each school. The schedule of values will be submitted for approval within ten days after contract award.

- e. Explain any additional charges or fees in the proposal. There are no additional charges or fees to be included in our proposal. Optional items worthy of consideration are listed below
- f. Recommended spare list. (Optional)

<u>Item</u>	<u>QTY</u>	<u>Cost</u>
TXRX 800 MHz BDA, model# 62-89A-50-A18-G1	1	\$8,798.00
TXRX 800 MHz BDA, model# 62-89A-D16-05-EXT	1	\$1,138.00
Cushcraft Donor Antenna, model# PC8010N	1	\$ 106.03
PolyPhaser, model# IS-50NX-C2-MA	1	\$ 64.23
Andrew Helix Cable	100'	\$ 260.00

Andrew Cable Connector, model# L4PNM-RC	4	\$ 113.56
Andrew Signal Divider, model# S-2-CPUS-L-N	1	\$ 63.76
Andrew Signal Divider, model# S-3-CPUS-L-N	1	\$ 92.98
Andrew Signal Divider, model# S-4-CPUS-L-N	1	\$ 112.91
Andrew Decoupler, model# C-10-CPUS-L-N	1	\$ 146.11
Andrew Indoor Antenna, model# CELLMAX-O-25	1	<u>\$ 35.87</u>
Total		\$ 17,243.69

- g. Battery Back-Up Systems: (Optional) It was difficult to determine during the site visit if and which schools had emergency power available. Therefore, we are submitting optional pricing for furnishing UPS systems to provide 4-hour (approximately) battery back-up as follows:

Battery Back-Up Systems	Price
Mt. Pisgah Middle School, Material/Labor (1BDA)	\$ 867.00
South Wind Middle School, Material/Labor(1BDA)	\$ 867.00
Arlington Middle School, Material/Labor (1BDA)	\$ 867.00
Dexter Middle School, Material/Labor (1BDA)	\$ 867.00
Woodstock Middle School, Material/Labor (1BDA)	\$ 867.00
Collierville High School, Material/Labor (3BDA)	\$2,601.00
South Wind High School, Material/Labor (4BDA)	\$3,468.00
Arlington High School, Material/Labor (4BDA)	\$3,468.00
Houston High School, Material/Labor (2BDA)	\$1,734.00
Bolton High School, Material/Labor (4BDA)	\$3,468.00
Germantown High School, Material/Labor (7BDA)	\$6,069.00
Millington High School, Material/Labor (5BDA)	\$4,335.00
Bartlett High School, Material/Labor (4BDA)	<u>\$3,468.00</u>
Total:	\$32,946.00

- h. Remote Monitoring & Control of the DBA (Optional). This feature allows the county, or Lord & Company on behalf of the county, to monitor and troubleshoot the systems remotely.

Mt. Pisgah Middle School, Material/Labor (1BDA)	\$ 432.00
South Wind Middle School, Material/Labor(1BDA)	\$ 432.00
Arlington Middle School, Material/Labor (1BDA)	\$ 432.00
Dexter Middle School, Material/Labor (1BDA)	\$ 432.00
Woodstock Middle School, Material/Labor (1BDA)	\$ 432.00
Collierville High School, Material/Labor (1BDA)	\$ 432.00
South Wind High School, Material/Labor (1BDA)	\$ 432.00
Arlington High School, Material/Labor (1BDA)	\$ 432.00
Houston High School, Material/Labor (1BDA)	\$ 432.00
Bolton High School, Material/Labor (1BDA)	\$ 432.00
Germantown High School, Material/Labor (6BDA)	\$2,592.00
Millington High School, Material/Labor (4BDA)	\$1,728.00
Bartlett High School, Material/Labor (3BDA)	<u>\$1,296.00</u>
Total:	\$9,936.00

- i. **Warranty Terms.** All equipment and workmanship shall be warranted for a period of one year from date of test and acceptance of the systems. This warranty will cover all necessary parts and labor needed to take corrective action and repair resulting from defects in equipment or workmanship at no cost to the County. In addition, Lord & Company will visit the sites, at the end of the warranty period and perform a final check with the county on all DAS systems for each school to make sure the county has good working systems at the end of the warranty period.
- j. **Training.** Within 10 days of system acceptance, Lord & Company will provide two 3-hour training sessions for four County personnel with regards to system operation, testing, maintenance and trouble-shooting etc. The content of the training will be finalized in conjunction with the county based on the experience, knowledge and expertise of the employees being trained. LORD will comply with any reasonable training requirements.
- k. **Recommended Maintenance Schedule.** Although there is very little, if any, "maintenance" required on the equipment we intend to furnish, the operation of public safety systems should be checked regularly. Therefore, as part of the customer training we plan to teach the designated county personnel to perform quarterly test on the equipment to make sure it is in good working order. As soon as the contract is awarded and the design phase is completed, our team will work closely the designated County personnel to setup a Preventive Maintenance Plan.
- l. **The Preventive Maintenance Plan** will not only ensure that the equipment will operate optimally, but to extend the life cycle of all the equipment as well. Once the PM plan has been developed, Lord & Company, in conjunction with the county, will develop a PM schedule with recommended dates for the PMs. All PM procedures on the BDA's will be designed to be performed while the system is active, thus preventing any interruption of service. As a general rule, PM's include
 - a. Perform quarterly or semi-annual walkthrough tests that include; visual verification of the each BDA, Antenna, system inventory, and verification of the current as-built drawings, and test the quality of the audio reception and transmission in different parts of each building. This inspections will also verify the environment, cleanliness and other items which may have been installed or stored near the BDA's and could affect their long term performance
 - b. Annual inspection, re-alignment and optimization of the schools' In-building Systems.
 1. Inspection will verify proper operation of all BDAs' (cooling fans, connectors, cable, etc.), Battery Backup Units, Antennas, Dividers, Couplers and cable for wear.
 2. If needed, re-alignment of BDAs to include any necessary adjustments to ensure proper operating conditions, in addition to

- vacuuming/cleaning the BDAs, re-supporting cables, and minor re-alignment of antennas if needed.
3. Test the radio coverage throughout the facilities and optimization of the system if required.
 4. Document the condition of all BDAs/Systems, Antennas, Dividers, Couplers and Cable. Submit reports depicting radio coverage throughout the facilities.
 - c. Submit a formal report of the systems operation and all findings of the annual walkthrough, to include an updated version of the as-built drawings within 30 days.
- m. Supplemental Services.
- The County may, during the course of, or after completion of this contract request Lord & Company to perform supplemental services which are outside the requirements of the scope of the project. All work performed under Supplement Services will be requested and approved in advance, in writing, by the contracts/purchasing officer. In response, Lord & Company will provide the County a cost estimate, which will include an itemized breakdown for labor, parts and materials as well as a schedule with milestones for completing the services. Some of these services may include
1. Moving radiating & non-radiating cables due to renovations
 2. Re-design, drafting, engineering or re-testing.
 3. System expansions or modifications.
 4. Field Engineering
 5. Interference Resolution or Interference Resolution Consulting
 6. Consulting for New Construction Design Interface with existing In-Building systems.
- n. Additional costs in the event of re-banding. None are anticipated unless the customer prefers us to re-test or certify audio quality with the new band. We have carefully selected BDA's with a wide enough band that re-banding should not affect them.
- o. Anticipated cost for maintenance and support of the system beyond acceptance and warranty of the system, software, service and hardware beyond the first year for the bi-directional amplifier systems solution for a four (4) year period is required in the proposal.
- a. Second Year Costs \$15,000
 - b. Third Year Costs \$16,500
 - c. Fourth Year Costs \$18,150
 - d. Fifth Year Costs \$19,965

5.0 Experience of the Respondent

a. Background and brief history: Lord & Company, Inc. is a technology driven, professional services organization involved in the design, development, installation and start-up of microprocessor based instrumentation, controls, and wireless communications systems.

Incorporated in March 1982, the company's initial focus was the design and installation of Instrumentation & Control systems for industrial facilities. For the first 9-years, all of our work was done for four clients. Two of which were IBM – GTD division and Fairfax County Pollution Control plant in Lorton, VA who continues to be a client. With IBM, although most of our projects were in Manassas, VA at their semiconductor manufacturing facilities, our company completed projects all across the US, from Boulder, Colorado to Burlington, Vermont. Unfortunately in 1990 IBM closed its door in the Manassas campus.

In 2001 Lord & Company was admitted in the federal governments' 8(a) program which allowed us the company to begin a relationship with several federal agencies. While in the program the company received several awards and was the subject of several success articles. The company graduated from the program in March of 2000.

In 1994, the company started a wireless communication division focusing on signal propagation. Our mission is to:

DEPLOY BEST-OF- BREED PRODUCTS AND EXECUTE BEST PRACTICES, TO
DESIGN, INSTALL, AND SUPPORT LIFE-SAFETY/PUBLIC SAFETY IN-BUILDING
WIRELESS COMMUNICATIONS FOR INDUSTRY AND GOVERNMENT

During the past several years, Lord & Company has continued to steadily grow and expand. This growth is a direct result of our ongoing commitment to provide our clients with the highest quality of service and customer satisfaction. Our approach to management, recruitment, staff development and quality control is geared to ensure the delivery of outstanding services and products to each and every one of our clients in every contract.

b. A statement of how long the Proposer has provided services similar to the Services requested herein. Lord & Company, Inc. has been installing Bi-Directional amplifier systems for two-way radio communications since 1994.

c. Experience and background in providing services similar to the services requested herein. Funding for these types of systems in public buildings and schools has not been available until recently. Therefore, our experience with school systems goes back for a couple years. During this time, we have installed systems for 4 schools in Henrico

County, Virginia and are currently installing 16 systems at schools and other buildings in Albemarle County, City of Charlottesville and the University of Virginia. All of these projects were design/build with almost identical requirements as those of Shelby County. Additionally, in the last two years we have completed in excess of 20 major commercial projects with almost identical requirements.

d. Other relevant information about the experience and knowledge base of the proposer.

Lord & Company extensive experience in the design, installation, optimization and troubleshooting of DBA-based radio communications systems include a large variety of applications and environments, including in-building/tunnel systems, shipboard, and in-building public safety radio systems. The following scenarios represent a cross-section of solutions successfully completed for a wide range of clients:

PROBLEM: No public safety radio or cell phone communications in the service tunnels below the Nation's Capitol.

SOLUTION: Lord & Company installed, supports and maintains an extensive emergency radio communications system in the tunnels below the U.S. Capitol complex. Our system, which includes complete handheld radios (150 MHz – 1 GHz systems) and Nextel cell phone coverage, offers extraordinary reliability under extreme conditions:



- Well over two miles of heliax and radiax cabling
- Constant 160 degree F heat
- 60 feet below the surface

PROBLEM: Weak to non-existent mobile radio coverage in many areas of U.S. Navy ships.

SOLUTION: Outfit the ships with a ship-board distributed antenna system to ensure complete mobile radio coverage in every compartment of the vessel.



- To date, we have outfitted six U.S. Navy ships, bow to stern, with reliable handheld radio communications systems.
- Any communications from the ship's crew anywhere on board is loud and clear to the Captain on the bridge.
- These systems were completely designed, installed and supported by Lord & Company Technologies.

PROBLEM: Security and first responder personnel in the nine-building Smithsonian Museum complex could not communicate with each other using their mobile radios and cell phones.

SOLUTION: Lord & Company installed and distributed antenna systems and bi-directional amplification in all the Smithsonian



Institution buildings including the National Zoo.

- Very exacting work in historical buildings
- Significant engineering challenges imposed by historical preservation regulations
- All work was done without interruption to the Institute or the public

PROBLEM: Carnival Cruise Line crew members were unable to communicate instantly from any location on the ship using low-powered hand-held radios. This capability is critical to passenger safety and comfort.



SOLUTION: Lord & Company outfitted eleven cruise ships with a shipboard-distributed antenna system to insure complete mobile radio coverage in every compartment.

- This wireless communication system was completely designed, installed and supported by Lord & Company Technologies.
- After a disastrous on-board fire, our system was the only means of communication on the vessel.

PROBLEM: Municipalities in the mid-Atlantic region now require distributed antenna systems and bi-directional amplification in all new high-rise buildings for first responders.



SOLUTION: Lord & Company Technologies, with its extraordinary background in life-safety RF communications systems, has become the **region's "go-to" company for commercial real estate developers** that need to satisfy these new city and county ordinances for new construction.

e. Resume of each employee engaged in the Services, including the role of each and an overview of their previous experience with similar projects. Resumes follow in order on non-numbered pages.

6.0 References

References of the Proposer, including at least three (3) other clients for whom the Proposer has provided services similar to the Services (with preference given to clients comparable to Shelby County Government) and, for each such reference, the business name, the identification of a contact person, the title of the contact person and a telephone number.

References:

1. Albemarle County/City of Charlottesville/ University of Virginia
 - i. 13 public buildings including two (2) high schools, one (1) middle school and seven (7) university buildings
 - ii. Distributed antennas systems
 - iii. 800MHZ Bi-directional amplification
 - iv. First Responder, Public Safety Radio System (PSRS)
 - v. 100% Coverage, DAQ 3.4
 - vi. scheduled for Completion in August 2008
 - vii. Cost: \$366,000
 - viii. POC: Wayne Campagna 434-971-1022
 - ix. Buyer: Hugh Gravitt 434-296-5854
2. Henrico County School System – County of Henrico, VA
 - i. (4) High schools and middle schools
 - ii. Distributed antennas systems
 - iii. 800MHZ Bi-directional amplification
 - iv. First Responder, Public Safety Radio System (PSRS)
 - v. 100% Coverage, DAQ 3.4
 - vi. Completed April 2008
 - vii. Cost: \$ 113,000
 - viii. POC: Todd Pugh
 - ix. Buyer: Cecelia Stowe 804-501-5685
3. Henrico County Water Treatment Facilities – County of Henrico, VA
 - i. 800MHZ Bi-directional amplification
 - ii. First Responder, Public Safety Radio System (PSRS)
 - iii. 100% Coverage
 - iv. Cost \$152,330.04
 - v. Completed August 2004
 - vi. POC Russ Navratil 804-935-0367 Ext 222
4. Richmond Police Department Headquarters Building.
 - i. 800MHZ Bi-directional amplification
 - ii. First Responder, Public Safety Radio System (PSRS)

- iii. 100% Coverage
 - iv. Cost \$19,314.00 (installation & Optimization only)
 - v. Completed May 2005
 - vi. POC John Vernon 804-646-1503
5. Virginia Beach Convention Center, Virginia Beach VA
- i. 800MHZ Bi-directional amplification
 - ii. First Responder, Public Safety Radio System (PSRS)
 - iii. -95dbm, 100% Coverage
 - iv. Completed July 2006,
 - v. Cost \$67,503.98,
 - vi. POC Courtney Dyer 757-427-4438
6. Virginia Beach Emergency Communications Center, VA Beach, VA
- i. Bi-directional amplification 800MHZ
 - ii. First Responder, Public Safety Radio System (PSRS)
 - iii. -95dbm, 100% coverage
 - iv. Cost \$44,500
 - v. Completion Date July 2006
 - vi. POC Robert Nibarger 757-385-4232
7. The Regent Office Building, Arlington, VA
- i. Bi-directional amplification
 - ii. First Responder, Public Safety Radio System (PSRS)
 - iii. -95dbm, 95% coverage
 - iv. \$74,000
 - v. August 2006
 - vi. Kevin Gunthert
 - vii. The JGB Companies, Chevy Chase Maryland
 - viii. 240.333.3600
8. 400 Maple Street office Building, Falls Church City, VA
- i. Bi-directional amplification
 - ii. First Responder, Public Safety Radio System (PSRS)
 - iii. -95dbm, 95% coverage
 - iv. \$39,900
 - v. September 2006
 - vi. Steve Harloe
 - vii. Atlantic Reality, Vienna VA
 - viii. 703.760.9501
9. Io- Piazza Condominum, Arlington, VA
- i. 800MHZ Bi-directional amplification

- ii. First Responder, Public Safety Radio System (PSRS)
- iii. -95bbm, 95% coverage
- iv. \$39,500
- v. February 2007
- vi. Neil Winsten
- vii. Ed Peete Company, Arlington VA
- viii. 703.556.4420

ADDITIONAL REFERENCES

U. S. Capitol, Capitol Power Plant – Washington, DC

Designed, supplied all materials, staged, installed, tested and optimized 1.75 miles of interior corridors for wireless communications backbone system, providing complete (100%) radio coverage. Cost \$314,997.73, Completion Date April 2002, POC: Michael Buck 202-320-8487

National Zoo – Washington, DC

Designed, supplied all materials, staged, installed, tested and optimized 31 In-building and steam tunnel wireless communication systems. Provided complete (100%) interior coverage. Cost \$575,455.43. Completion Date May 2001, POC: Michael Pickett 202-673-4730

Smithsonian Institution – Washington, DC

Designed, supplied all materials, staged, installed, tested and optimized In-building wireless communication systems. Provided complete (99%) interior coverage for nine museums: Cost \$1,093,000. Completion Date September 2002 & April 2003, POC: Bernie Wimmer 202.497.7121.

National Archives – Washington, DC

Designed, supplied all materials, staged, installed, tested and optimized In-building coverage antenna system. Provided complete (100%) in-building coverage. Cost \$158,500.00, Completion Date October 2004, POC: Richard "Chip" Sandage 202-501-5040

U. S. Supreme Court – Washington, DC

Designed, supplied all materials, installed, tested and optimized an expanded full frequency spectrum (150 MHz to 1 GHz) coverage of the basement interior corridors for wireless communication backbone system, providing complete (100%) radio coverage. Cost \$46,074.82, Completion Dated January 2005, POC Joel Evans 202 202-479-3224

Letter Of Reference:

As part of our license applications with the State of Tennessee we were asked to submit a reference letter. Please see the following non-numbered reference letter and numerous Letters of Commendation from various government agencies.

7.0 Additional Information

- a. A description of any other resources available to the Proposer that will be useful in providing the Services.

Lord & Company is a top-tier client/partner with best-of-breed RF Communications hardware manufactures including:

Andrew Corporation for Cabling and Connectors
TXRX/Bird Technologies for BDA and In-line amplifiers

Executives at both companies will be references.

- b. Local Subcontractors

Lord & Company has been in communication with the owners of two local, minority owned companies with good references as follows:

Mel Ramsey
Telescope Communications
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We have selected two companies and intend to use both because they have strengths in different areas. One has more capabilities in the electrical and installation areas where as the other is more technical and support us after the contract is completed if needed. In addition, should the quality and responsiveness not be conducive to deliver a high quality and timely system, we will have the other to use as a second resource. Ultimately, we intend to subcontract more than the 2.5% required for contracts of this size. Letters of commitment are included in this section.

Note: Cut sheets included for reference.